

WHAT IS CLAIMED IS:

1. A method of determining a predictive model for discourse functions comprising the steps of:
  - determining a corpus of speech utterances;
  - 5 determining a least one discourse function associated with at least one speech utterance;
  - determining at least one prosodic feature associated with the at least one discourse function; and
  - determining at least one predictive model of discourse functions based  
10 on the prosodic features and the discourse functions.
2. The method of claim 1, in which the discourse functions are determined based on a theory of discourse analysis.
3. The method of claim 2, in which the theory of discourse analysis is  
15 at least one of: the Linguistic Discourse Model, the Unified Linguistic Discourse Model, Rhetorical Structure Theory, Discourse Structure Theory and Structured Discourse Representation Theory.
4. The method of claim 1, in which the predictive models are determined based on at least one of: machine learning, rules.
5. The method of claim 4, in which the machine learning based predictive  
20 models are determined based on at least one of: statistics, decision trees, Naïve Bayes.
6. The method of claim 1, in which the prosodic features occur in at least one of a location: preceding, within and following the associated discourse function.
- 25 7. The method of claim 1, in which the prosodic features are encoded within a prosodic feature vector.
8. The method of claim 7, in which the prosodic feature vector is a multimodal feature vector.
9. The method of claim 1, in which the discourse function is an intra-sentential discourse function.  
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10. The method of claim 1, in which the discourse function is an inter-sentential discourse function.

11. A system for determining predictive discourse function models comprising:

an input/output circuit for retrieving a corpus of at least one speech utterance;

5 a processor for determining prosodic features associated with the at least one speech utterance, and which determines at least one discourse function associated with the corpus of at least one speech utterance and determines at least one prosodic feature associated with the at least one discourse function and determines a predictive model for discourse functions  
10 based on the prosodic features and the discourse function.

12. The system of claim 11, in which the discourse functions are determined based on a theory of discourse analysis.

13. The system of claim 12, in which the theory of discourse analysis is at least one of: the Linguistic Discourse Model, the Unified Linguistic  
15 Discourse Model, Rhetorical Structure Theory, Discourse Structure Theory and Structured Discourse Representation Theory.

14. The system of claim 11, in which the predictive models are determined based on at least one of: machine learning, rules.

15. The system of claim 14, in which the machine learning based  
20 predictive models are determined based on at least one of: statistics, decision trees, Naïve Bayes.

16. The system of claim 11, in which the prosodic features occur in at least one of a location: preceding, within and following the associated discourse function.

25 17. The system of claim 11, in which the prosodic features are encoded within a prosodic feature vector.

18. The system of claim 17, in which the prosodic feature vector is a multimodal feature vector.

19. The system of claim 11, in which the discourse function is an intra-sentential discourse function.  
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20. The system of claim 11, in which the discourse function is an inter-sentential discourse function.

21. A carrier wave encoded to transmit a control program, useable to

program a computer to determine a predictive model for discourse functions,  
to a device for executing the program, the control program comprising:

instructions for determining a corpus of speech utterances;

5 instructions for determining a least one discourse function associated  
with at least one speech utterance;

instructions for determining at least one prosodic feature associated  
with the at least one discourse function;

instructions for determining at least one predictive model of discourse  
functions based on the prosodic features and the discourse functions.

10 22. Computer readable storage medium comprising: computer readable  
program code embodied on the computer readable storage medium, the  
computer readable program code usable to program a computer to determine a  
predictive model for discourse functions comprising the steps of:

determining a corpus of speech utterances;

15 determining a least one discourse function associated with at least one  
speech utterance;

determining at least one prosodic feature associated with the at least  
one discourse function; and

20 determining at least one predictive model of discourse functions based  
on the prosodic features and the discourse functions.